All amounts are calculated in domestic currency.

Purchase Order Receipt Listing

Friday, January 27, 2017 2:33:53 PM

All Vendors PO ID PO35031 All Receipt Dates All Line Item Types All Item ID/GL/WOs All Rec. Employees All Currencies Grouped by Vendor ID

\$94.46 \$47.53 \$81.18 \$95.99 **Book Amt** \$53.47 \$40.96 \$189.74 0 0 Inspected Qty/ MRB Qty/ Rejected Qty MRB Reject (PO U/M) Qty 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 Cost Per Unit/ Recv Value \$6.65 \$94.46 \$53.47 \$1.98 \$47.53 \$4.46 \$6.76 \$81.18 \$3.41 \$40.96 \$8.00 \$95.99 \$15.81 \$189.74 Recv Qty (PO U/M) 14.2000 24.0000 12.0000 12.0000 12.0000 12.0000 12.0000 Recv Date/ Recv Emp QUIR01 1/27/2017 QUIR01 1/27/2017 1/27/2017 1/27/2017 QUIROI 1/27/2017 QUIR01 71/2017 1/27/2017 QUIR01 7102/72/1 7102/72/1 QUIR01 QUIR01 1/27/2017 Required Date Required Qty 14.2000 1/27/2017 1/27/2017 24.0000 12.0000 1/27/2017 12.0000 1/27/2017 12.0000 12.0000 12.0000 Thyssenkrupp Materials CA Ltd PO U/M / Stock U/M 303 Round Bar 0.750 f M6061T6B0.500X06. f M6061T6B0.500X12. f M6061T6B0.375X01. 6061T6 BAR .375 x 303 Round Bar 1.00 17-4 round bar .750 6061-T6 Bar .500 x 6061-T6 Bar .500 x 303 Round Bar Reference/ Description/ - M174R0.750 M303R0.500 M303R0.750 M303R1.000 M136697 M136697 M136697 M136697 Cert Std M136697 M136697 M136697 VC-COP001 0.500" 1.00 00.9 Project ID VendorID\Vendor Name Line Nbr/ Insp Req 2° 2° S 2º No No S 2 N 9 ~ 4 Purchase Order ID/ Curr Type PO35031 CAD

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0.0000

Total Receipt Value: Total Balance Due Quantity:

0.0000

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID\Vendor Name PO350318	ndor Name		VC-COP001 Thyssenkr M6061T6B0.750X00. f 750	Thyssenkrupp Materials CA Ltd 750X00. f	1/27/2017	7102/12/1 7102/12/1	12.0000	\$3.41	0.0000	0	\$40.96
CAD	No		6061-T6 Bar .750 x .750	.750 x f	12.0000	QUIR01		\$40.96	0.0000	0	
	6		M136697 - M6061T6B00750X00 f .125	7750X00 f	7102/12017	7102/12/1 7102/12/1	126:000	\$0.41	0.0000	0	\$49.16
	No		6061-T6 Bar .750 x .125	.750 x f	100.0000	QUIR01		\$49.16	0.0000	0	
			M136697								
7	10		M6061T6B2.000X01. f 250	000X01. f	1/27/2017	1/27/2017	12.0000	\$6.70	0.0000	0	\$80.36
	No		6061-T6 Bar 2.00 x 1.25 M136697	2.00 x f	12.0000	QUIR01		\$80.36	0.0000	0	
	Ξ	t	M7075T6B7.000X2.0 f	000X2.0 f	1/27/2017	1/27/2017	0069'9	\$78.82	0.0000	0	\$527.32
	S.		7075-T6 BAR 7.000" f X 2.000" (order in billets - 13.375") M136697	. 7.000" f er in 5")	0069.9	QUIR01		\$527.32	0.0000	0	
	12 No		71401-45 PROCUREMENT QUALITY CLAUSES M136697	AUSES	1,27/2017	1/27/2017 QUIR01	1.0000	\$0.00	0.0000	0 0	\$0.00
								T Total Q	Total Received Quantity; Total Qty to Inspect (PO U/M); Total Reject Quantity;	antity: U/M): antity:	249.8900 0.0000 0.0000

BILL OF LADING No: PEC 27450 Ship Date 23Jan17 at 10:59 From PFW Ship From: THYSSENKRUPP MATERIALS NA Probill 2821 LANGSTAFF ROAD VIM DELIVERY Via CONCORD, ONTARIO L4K 5C6 FOB CONCORD Tel: 905 669 9444 Fax: 905-738-9033 PREPAID Frt Route 0- 0 Manifest Vhcle Trailer STAN IVERS (905-532-1350) Slp Ship To: (1) Sold To: (20115) DART AEROSPACE DART AEROSPACE BILL OF LADING 6) Our Order PEC- 8887- 6 Your PO # 35031 ALUMINUM FLAT BAR 6061-T6511 .50" X 6.00" X 144.0000" PCS 10 Heat Number Tag No Quantity Wt LBS 201621892 610524 12 FT 42 7) Our Order PEC 8887- 7 Your PO # 35031 ALUMINUM FLT BAR ECONOPLT 6061-T6511 .500" X 12.00" X 144.0000" Heat Number Tag No Ouantity Z00108144/ 12 FT 610525 8) Our Order PEC- 8887- 8 Your PO # 35031 ALUMINUM SQUARE BAR 6,061-T6511 .750" X 144.0000" Heat Number Tag No Ouantity 610527 12 FT 201610858 / 9) Our Order PEC 8887- 9 Your PO # 35031 ALUMINUM FLAT BAR 6061-T6511 .125" x .750" X 240.0000" PCS O DE WE LBS Heat Number Tag No Ouantity 429847-4 610528 100 FT 10) Our Order PEC- 8887- 10 Your PO # 35031 ALUMINUM FLAT BAR 6061-T6511 1.250" x 2.00" X 144.0000" Heat Number/ Quantity Tag No Wt LBS 201617706 / 610529 12 FT 1 36 11) Our Order PEC- 8887- 12 Your PO # 35031

ALUMINUM PLATE 7075-T651 DOMESTIC 2.00" THICK X 7.0000" X 13.3750"

Part # ** FROM PLATE ****

Page: 2 Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE RAPPORTÉES IMMÉDIATEMENT. ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.

MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

DATE

VI.

BILL OF

No: PEC 27450 LADING Ship Date 23Jan17 at 10:59 From PFW

Probill

Via VIM DELIVERY

CONCORD FOB PREPAID

Frt

0- 0 Manifest Route Trailer Vhcle

STAN IVERS (905-532-1350) Slp

Sold To: (20115)

DART AEROSPACE 1270 ABERDEEN ST

HAWKESBURY, ON K6A 1K7

Ship To: DART AEROSPACE 1270 ABERDEEN ST

Ship From:

HAWKESBURY, ON K6A 1K7

THYSSENKRUPP MATERIALS NA

CONCORD, ONTARIO L4K 5C6

2821 LANGSTAFF ROAD

Tel: 613-632-9577 Fax: 613-632-1053

Tel: 905 669 9444 Fax: 905-738-9033

________ OF LADING BILL

8887- 1 Your PO # 35031 1) Our Order PEC-STAINLESS STEEL ROUND BAR 17-4 STAINLESS

.750" DIA X 170.0000"

Heat Number Tag No 610517 80.0644

Ouantity 14 ' 2.0000 "

Wt LBS

2) Our Order PEC- 8887- 2 Your PO # 35031 STAINLESS STEEL ROUND BAR 303 STAINLESS

.50" DIA X 144.0000"

Heat Number 428558

Tag No 610518 Ouantity 24 FT

LBS Wt 15

3) Our Order PEC- 8887- 3 Your PO # 35031

STAINLESS STEEL ROUND BAR 303 STAINLESS

.750" DIA X 144.0000"

Heat Number Tag No 100D 610519 Ouantity 12 FT

Wt LBS 18

4) Our Order PEC- 8887- 4 Your PO # 35031

STAINLESS STEEL ROUND BAR 303 STAINLESS

1.00" DIA X 144.0000"

Heat Number

Tag No 610520 Quantity 12 FT

LBS 33

5) Our Order PEC- 8887- 5 Your PO # 35031

ALUMINUM FLAT BAR 6061-T6511

.375" x 1.00" X 144.0000"

Heat Number 201621178

Tag No 610522

Quantity 12 FT

Wt LBS 6

1 Continued Page:

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT. MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

DATE

BILL OF LADING No: PEC 27450 Ship Date 23Jan17 at 10:59 From PFW THYSSENKRUPP MATERIALS NA Probill 2821 LANGSTAFF ROAD Via VIM DELIVERY CONCORD, ONTARIO L4K 5C6 FOB CONCORD

Frt

TOTAL:

PREPAID

Tags

11

PCS

21

LBS

393

Route 0- 0 Manifest Vhcle Trailer STAN IVERS (905-532-1350) Slp

Ship To: Sold To: (20115) 1) DART AEROSPACE DART AEROSPACE

BILL OF LADING GRAIN DIRECTION ALONG THE 13.375 INCH DIM **** Heat Number PCS Tag No Ouantity Wt LBS 9346164 610586 3.90 SFT 6 118

Heat Number *** Chemical Analysis ***

Tel: 905 669 9444 Fax: 905-738-9033

Ship From:

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR TO SHIPPING.

ATTN: CHANTAL/LINDA

** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **

** REFERENCED ON IT **

TOTAL 1 SKID, 2 BDLS GW. 443 LBS

CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA CONCORD, ONT. *** 9:00 AM TO 4:00 PM *** **** TEL. 800-926-2600 ****

**************** WE STOCK STAINLESS STEEL

PLEASE LET US QUOTE YOUR NEXT REQUIREMENT

Page: 3Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE RAPPORTÉES IMMÉDIATEMENT. ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT. MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

BILL OF LADING

Ship From: THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD

CONCORD, ONTARIO L4K 5C6

Tel: 905 669 9444 Fax: 905-738-9033

Ship To: DART AEROSPACE

PEC 27450 No: Ship Date 23Jan17 at 10:59 From PFW Probill

Via VIM DELIVERY

FOB CONCORD Frt PREPAID

Route 0- 0 Manifest

Vhcle Trailer

STAN IVERS (905-532-1350) Slp

Sold To: (20115)

DART AEROSPACE

BILL OF LADING

***PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE

ADDED TO EVERY ORDER. ***

***UNE SURCHARGE D'ENERGIE DE \$25.00 SERA AJOUTEE A CHAQUE COMMANDE. ***

***POUR VOS BESOINS D'ACIER INOXYDABLE,

CONTACTEZ-NOUS. NOUS L'AVONS! TEL. 800-926-2600

Page: 4 Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT. MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

DART AEROSPACE

STAINLESS STEEL ROUND BAR 17-4 STAINLESS .750" DIA X 170.0000" PART NO.

PO/Rel 3503:

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs. **Certificate of Mill Test Results**

BL PEC-027450-001

23Jan17 Pg 1/1

Signed by:





INSPECTION CERTIFICATE

Certificate Type

: EN 10204 / 3.1

Our Sales Onler No.	100308	Invoice No.	1516110470	Certificate No.	1516-0006043
Customer Order No.	PEC-269804	Invoice Date	09.01.2016	Dato	09.01.2016

Customer

Thyssankrupp Meteriels No 2821 Langstaff Rd. Concord, Ontario L4K SCS Ontario L4K SCS Canada

Trado Mark

ASSL

Inspector's Merk

ASS1

Steel Grade	17-400	Shape	Round	Size	0.7500 inch
Heat No.	800644	Tolerance	A-484 (CF)	Length of Bars	144-168 inch
Net Weight	974.61 LBS	Number of Bars	46	Melting Process	EF / AOD / MEMS
Bundle No's	AH-4858				
Requirements	AMS 5643T:2013	ASTM A 564:2013	NACE MR 0175 / IS	0 15156:2009	

		- 6			,
Chemical	Ar	۱ai	٧s١	87	6

	С	58	Mn	P	\$	Cr	Mo	SME	Cu	Nb				1	
Min.				-		15.000		3.000	3.000	0.150					
Max	0.070	1.000	1.000	0.040	0.030	17.500	0.500	5.000	5.000	0.450					
Meli	0.042	0.300	0.790	0.038	0.025	15.670	D.312	4.100	3.190	0.242					

Mechanical Properties

	YS/(Rp 0.2%) (N/mm2)	UTS (N/mm2) .A5 N A 370.2014	% Elongation	% Reduction Area	Hardness (BHN) ASTIM A 378/2014	Cher	y impact \ {J	Noich (Lo	ngitudnal)	
Min.	AS144 3-0.2014		712.110.00.00.00			Temp. Deg		R	Husel	
Max.		7				(C)	1	2	3	Avg.
Results	998 690	1102.350	15.100	52.200	326.000			1		+

Heat Treatment:

Solution Annealed @ 1900°F. Soaking for thr-20mins & Cit Quenching to below 90°F.

° EL % = 18.10

* RA % = 51.10

"Hardness = 416 BHN

14 9-89

Remarks :

* Country Of Origin Of Goods - India

* Free from Radioactivity - verified through Gamma Ray Spectrometer

* No Mercury Contamination

* No walding has been performed on the material

* Visual & Dimensional Inspection - OK

* Material Identification tested through X-ray based portable Spectrometer

* RoHS Compliance

* H-900 Capability test report

* YS = 1198.60 N/mm2

* VTS = 1198.00 N/mm2

QA Head / NDT Inspector

We confirm that the material is manufactured & supplied in accordance to the Purchase Order

Ambica Stainless Steel Limited

A-1/1, Wazirpur Industrial Area, New Delhi 110052 India Tal.: +31(120)4564585-88 Email: Info@assal.co.in Web: www.ambicastainless.com CIN: U27106512064PLC131284

STAINLESS STEEL ROUND BAR 303 STAINLESS .50" DIA X 144.0000" PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-027450-002

Pg 1/2



Acciaierie Valbruna s.p.A.

38100 VICENZA (Italia) - Viale della scienza, 25 z i. Telefono 0444.988211 - Fax 0444.963836 Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37 Telefono 0471.924111 - Fax 0471.924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: EN 10204 (2004), 3.1

Certificato nr. MEST955824 / 2016 /

VALBRUNA CANADA LTD 8724 HOLGATE CRESCENT L5T 521 - MILTON, ONT L5T 5Z1 - CA

State di fornitura : Hot rolled - Annealed Cold Drawn Delivery state East de livralar

Produttore:

Marchi di Fabbrica:

STABILIMENTO DI BOLZANO

Ordine nr: 608005939 Stock - Canada

Your order Communic

Conferma ordine nr. El 16008423 White Our Occulent or

Tipo di Elaborazione: E+AOD

Mening process 303HS Qualità:

MV188ZHS MAXIVAL Marca

Punzone del Collaudatore:

Avviso di Spedizione: D-BZ16007820 Unfarone (pal Pacting Se/B.L.

Punzonatura: 303HS

SPECIFICHE:

rungen / Require VSI 0 303 HS A,CF

AISI 303

AMS 5540 V S30300 A AMS 5640 V TYPE1 A ASME SA320 2015 B8F (0) ASTM A314 2015 S30300

ASTM A320 2015A B8F (1) ASTN A370.2015 ASTM A582 2012 S30300 A

MIL-S-862 B/1 303 QQ-S-764 B/2 303 A (0) SECTION II PT.A 2015 EDITION Chemical analysis only.

(1)Chemical analysis only

		Tolleranza: ASTM A484-16 TABLE 7 Tolleranza: ASTM A484-16 TABLE 7					
Pos. rir. Pos. se. hare se. Mr. de poste	Oggetto Grgenolant Product decolation Deporter the specials	Dimensioni - In	Lunghezza - In Lunge Langus Langusu	Colata Solvata Codes	Pezzi Mistori Piron Prosi	Peso - LB Garacte Wanging Posts	Lotto nr.
0010	Round	0,5000	146/ 146	428558		2.105	612201700

			1)10	longicudinelulengs, 7	trasversafelguer, Oh	Tenguaziele/tengentiel			1 222				
TEST	Provetty/ Protestas Specimen Eurovene Larg dam Specim Sar of Case Tricke Video Chem Telchemo Larg diant opiois	°F	Pasic. Saggio	Sneivamento Mentagratin Trial Share Livin chestors Rp 0,2%	Snarvamento Bredgnere Vieti State Laine etialique		Allung	E 4d	Brack	rione riong rates	Resilienza Xufuddagartab Impad Yoka Perilience		Durezza lisaro lisaron Derox HB
Ashedese	ri richiesti		in ax		-	-	•	-	•	-	•		140 255
A	8.75	68	L	88		110		25		49	i	228	

					Cham			himic						
Colore Steel Schreize/Coulde	min 0,030 man 0,060	9,20 1,00	1,50	17.00 18.00	0,80	1,00	8,00 10,00	-	0,100	0.32	9,4000		1:	
1) c %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P%	S %	Zr %			
428558	0,036	0,43	1,83	17,75	0,55	0,61	8,12	0,103	0,030	0,32	0,0044			

Produced without class I-II Ozone depleting substances. Solution heat treated free from continuous carbide network. Micro and macro etch test : OK Reduction ratio = 176,7:1 Annealing temperature: 1960" F for 0.5h/water. Material is DFARS Compliant

Bolzano, 15/11/16 BBLD06 - NEST955824

Il collaudetore di atabilimento / der Werkesachverstjerdige / Works inspector / L'agent d'usine
M. Rizzotta / L'agent d'usine

Pagina - 1 di 2

(Mod. MCE2)

DART AEROSPACE

STAINLESS STEEL ROUND BAR 303 STAINLESS .50" DIA X 144.0000" PART NO. PO/Rel 3583

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-027450-002

23Jan17

Pg 2/2



Acciaierie Valbruna s.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.i. Telefono 0444.968211 - Fax 0444.963836 Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37 Telefono 0471.924111 - Fax 0471.924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

in conformità a: EN 10204 (2004), 3.1

Certificato nr. MEST955824 / 2016 /

Pr@fung/Tuet/Essei

Cliente / Besteller/Purchaser/Client
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT

Nect/According to/Selon

State of femilium: Hot rolled - Annealed Cold Drawn

Produttore:

Hormotor/kernt/John penductric

STABILIMENTO DI BOLZANO

L5T 5Z1 - MILTON, ONT LST 5Z1 - CA

Tipo di Elaborazione: E+AOD Endumburgent Meting ances

Marca:

Marchi di Fabbrica: Zaichen des Lefermentes Trade media

<a>AV

Ordine nr. 608005939 Stock - Canada Bushel Your order Commende

Qualità:

303HS

Punzone del Collaudetore: Sumpel des Werksmichsmithidges

MR

Conferma ordine nr: El16008423 West/Ord OrderRef nr.

Melted and manufactured in Italy

Lieferangeige/Pecking Rat/S.L.

Werkstoff/Grade/Nanca

MV188ZHS MAXIVAL

Punzonatura: 303HS Kenssichnung Hautung Melquege

Sono state soddisfatte butte le condizioni richieste

Avviso di Spedizione: D-BZ16007820

Brend / Ruscos

Controllo antimescolanza: OK

Controllo visivo e dimensionale: soddisfa le esigenza Beschilgulig und Ausmensurg: shine Bearstendung Vasual inspection and dimensional disclarationisticory Controlle duals let dimensional shallottera.

Die gestellen Anleiderungen und I. Anlage erfült. The resternit het been furnished in accordance with the requirements. Le moseriel 8 ets trouvé sonforme aux anigenoss.

No welding or weld regain Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001: 2008, ISO/T\$16949; 2009, AS 9100C

The Quality Management System is Certified acc. Pressure Equipment Directive [197723/ECT] Annex 1,s.,4.3 and 2014/68/EU by TUEV and LLOYD'S Arry act of tempering, modification, alteration, counterleting and/or fatsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Accidence Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.

Maxival and/or Valptus grades/products are manufactured with ladie techniques to control composition, distribution, size and shape of non-metalic inclusions for improved.

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Accisience Valbrune SpA shall not be responsible for any improper use of the Products.

Bolzano, 15/11/16 BBL006 - AIESTROSE24 (Mod. MCE2) | MODERNA | MOD Il collaudatore di etablifenenzo / der Werkesachverständige / Works inspector / L'agent d'usine

M. Rizzotok Punt

Pagina - 2 di 2

STAINLESS STEEL ROUND BAR 303 STAINLESS 1.00" DIA X 144.0000" PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-027450-004

Pg 1/2



Acciaierie Valbruna sp.A.

36100 VICENZA (Italia) - Viale della scienza, 25 ± i. Telefono 0444,968211 - Fax 0444,963836 Stab.: 39100 BOLZANO (Italia) - Vis A. Volte, 4/37 Telefono 0471,924111 - Fax 0471,924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: EN 10204 (2004), 3.1

Pridate TestEssi

Certificato nr. MEST911146 / 2016 /

Nach#According fo/Selon

Cliente / Besteller/Purchaser/Client VALBRUNA CANADA LTD 8724 HOLGATE CRESCENT State di fernitura :

Hot rolled - Annealed Cold Drawn

Produitore:

ACCIAIERIE VALBRUNA S.P.A.

Ordinann: 604005710 Stock - Canada

L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

Conferma ordine nr. El16003312

Tipo di Elaborazione: E+AOD

Erachmeit ungseit Welling process Made d'alaboration

Qualità:

303HS

Marchi di Fabbrica: Zeichen das Liefernwerkes Trade morks Sigles de l'usins productate

Avviso di Spedizione: D-VI16019598 Lieterproreigs-Packing lies/B.L.

Marca: Markenbezsietmung Exand / Nu ance MV188ZHS MAXIVAL

Punzonatura: 303HS

SPECIFICHE:

Anforderungsa / Require

VSI 0 303 HS A CF AISI 303

AMS 5640 V S30300 A AMS 5640 V TYPE1 A ASME SA320 2015 B8F (0)

ASTM A314 2015 S30300 ASTM A320 2015A B8F (1) ASTM A370 2015

ASTM A582 2012 S30300 A MIL-S-862 B/1 303 QQ-S-764 B/2 303 A

Mechanical properties according to ASTM A370.

Aufzeichnungen / Notes / Notes

(DISECTION II PT.A 2015 EDITION Chemical analysis only

(1)Chemical analysis only.

DAS 14

9-89

		Tolleranza: ASTM A484-16 TABLE 7 Tolleranza/Allower ou/Tollerance					
Pos. nr. Pos. r. Bronn. Nr. 20 posse	Oggetto Outprodu nd Product sharolator Omerry, du znoud	Dimensioni - In Address surgen Chemitat Chemitat	Lunghezza - In Lungh Lungh Lungh	Coleta Schedus Godfe	Pezzi Sichado Papis Papis	Peso - LB	Lotto FVF.
0050	Round	1,0000	146/ 148 (428705		4.554	602607440

	Feet	on delik	_	dition Prüefun	g auf lieferberei		test a fetat		Prueba s	obre el male	riat así come entre	gado	
TEST	PEDINSTRAL Promission Speciment Speciments Largebon Speciment Horizon Dates Whith Davin, Treatment Large flacts open Thins	*F	Passa Seggio	Snervamento Stretamento Yele Seres Valo Seres Limita chatique Rp 0,2%			Allung	amento	Enwo	RA	Resilienza lie habbyerinb le pust valvo fit pitterios		Durazza Feere Speriosa Durini HB
Referedant	ori sichieshi ngen Pauloul volun- nes simuntous		nin ax	-	-	-	-	-	•	-	•		140 255
A	12,5	68	L	72		101		42		58		251	

TEST ALLO	STATO DI FORNITURA		
Test on delivery condition / Prilefung auf lieferbereitem prod	uid / Test a l'état de fourniture / Pru	eba sobre el male	rial así come entregado
TEST	min	max	
A Grain size for ASTM E112			6

					Chem			himic	a unalyse cnimique						
Colorius Anna : Chreekz s/Couline	ma 0,030 max 0,050	3,20 1,00	1 50 2,60	17,00 19,00	0,60	1 00	8,90 10 00		8,300	0,82	0,4000	-	-	:	-
7	C %	SI%	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S%	Zr %				
28705	0,034	0,48	1,86	17,45	0,50	0,65	8,07	0,095	0.029	0.32	0,0040				

Vicenza, 28/07/16	III collaudature di stabilimento / der Warkszachverstängige / Works inspector / L'agent d'usine M.Rizzotto / Cubili	Pagina - 1 di 2
(Mod. MCE2) wormer or to receive the secretary	M. R. 1220 (182)	

STAINLESS STEEL ROUND BAR 303 STAINLESS 1.00" DIA X 144.0000" PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-027450-004

Pg 2/2



Acciaierie Valbruna Sp.A.

38100 VICENZA (Italia) - Viale della scienza, 25 z.l. Telefono 0444.988211 - Fax 0444.983838 Slab.; 39100 BOLZANO (Ilalia) - Via A. Volta, 4/37 Telefono 0471,924111 - Fax 0471,924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

in conformità a: EN 10204 (2004), 3,1

Certificato nr. MEST911146 / 2016 /

Prince/Londfished

Signed by:

Cliente / Besteller/Purchaser/Client VALBRUNA CANADA LTD 8724 HOLGATE CRESCENT LST 5Z1 - MILTON, ONT LST 5Z1 - CA State di fernitura : Hot rolled - Annealed Cold Drawn

Tipo di Eleborazione: E+AQD

Produllore:

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 604005710 Stock - Canada

303HS

Marchi & Eabhrica:

Conferma ordine nr: El16003312 Mesocurbur Order/Refins

erschrodbungsart Melting process Made d'alphorate

Punzone del Colleudatore:

MR

Avviso di Spedizione: D-V116019598

Marca: Brand / Nushce MV188ZHS MAXIVAL

Punzonatura: 303HS

Produced without class I-II Ozone depleting substances. Solution heat treated free from continuous carbide network. Micro and macro etch test: OK Reduction ratio = 44,2:1 Material solution annealed 1070° C for 0.5h/water cooled.

Sono state soddisfatte tutte le condizioni richteste Die gesielen Antossurusgen sind it, Anlage wildlik The visiteral has been himskissi in zoppidanse with the requisionalis Controllo antimescolanza: OK Vervechslungsrf/kmg spectralans Antimissing lesting performed: OH Contrôle antimolongs fall, sucs

Controllo visivo e dimensionale: soddisfa le esigenze Beatchguifg uns Approvesung other Beanstonding Vigual-miquoten and deversioned checks safetedary Contributions of themselves safetelates

Material is DFARS Compliant

No welding or weld repair Material free from Mercury confamination

We declare that the finished product is checked for redicactive contamination through Portal System when it leaves the production plant.

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2008, ISO/TS16949 : 2009, AS 9100C

The Quality Management System is Certified acc. Pressure Equipment Directive '97/23/EC' Annex 1,s.,4.3 and 2016/68/EU by TUEV and LLOYD'S Any act of temporing, modification, alteration, counterfetting and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaiede Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction. Mayayas and/or Valiplus grades/products are manufactured with ladde techniques to control composition, distribution, size and shape of non-metallic inclusions for improved

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, citical and/or in any case different applications than those the meterial is genorally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Accidente Vallenina SpA shall not be responsible for any improper use of the

Vicenza, 28/07/18 VOC005 - MEST911146

Il colleudstore di stabilimento / der Werksanchverstheelige / Works inspector / L'aquet d'unine
M.Rizzottol / College

Pagina - 2 di 2

(Mod MCE2)

DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM SQUARE BAR 6061-T6511 .750'' X 144.0000''

PO/Rel 35031

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results

BL PEC-027450-008

Pg 1/1 23Jan 17



Service Center Metals

Prince George, VA 23875 5850 Quality Way

CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

ThyssenKrupp Materials NA-Concord.ON MANIFEST NUMBER 299073

CUSTOMER PO PEC-276004

SHIP TO

ThyssenKrupp Materials NA-Concord, ON

Quantity Certified

1,656 lbs

206pcs

CUSTOMER PART NUMBER

TKM-1263

ALLOY/ TEMPER DIE MUMBER MSQ1260

SALESPERSON DATE OF SHIPMENT

CERTIFICATION

OUR ORDER NUMBER

17EM

6061-T6511

MQSQ .750 +.010-.0

6/21/2016

D.Schroeder (Canada)

AMS-QQA-200/8 Rev-A SPECIFICATION ASTM-B221-14 StencilCont

RoHS 2011/65/EU Compliant

description, and that samples representative of the material met the composition limits and had the mechanical properties shown. revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6 We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification

mechanical Properties esis 12 201609136 Lot No. 5/23/16 6/21/16 lest Date 51.60 47.10 73 utimate i ensile Strength (KSI) max 52.10 52.00 min 42.90 49.40 rield Strength (KSI) max 50,40 49.70 14.40 BIN 11.30 Elongation Percent max 19.40 15.40

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Chemical Composition for Aluminum Alloy 6061	
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06111605	06101603	Cast #
201610858	201610858	Lot No.
6061	6061	Alloy
0.77	0.71	lõ
0.37	0.35	Fe
0.31	0.30	CL
0.10	0.10	S
0.87	0.87	Mg
0.09	0.15	įΩ
0.07	0.08	Zn
0.02	0.02	브
97.40	97.42	AL
0.05	0.05	Each
0.15	0.15	Others Total
United States of America	United States of America	Melt Source:

SCM extrusions are manufactured in the USA.

Doc No. 235953 Indexed 23Jun16 by slssup1

Calvin I Wiggins Director of Quality & Technical Services

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Print Date: 6/21/2016

ALUMINUM PLATE 7075-T651 DOMESTIC 2.00" THICK X 7.0000" X 13.3750" PART NO. ** FROM PLATE ****

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P

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

Pg 1of2

BL PEC-027450-011

Pg 1/2

Constellium

THYSSENKRUPP CA

2821 LANGSTAFF ROAD CONCORD ON L4K 5C6

000003



CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

0 D THYSSENKRUPP CA 2821 LANGSTAFF ROAD CONCORD ON L4K 5C6 CA

Ó Q PECKOVERS 110443240 4075 INCLUSION Serial: 20160721-0110443240 CUSTOMER PURCHASE ORDER NO. & ITEM Constellium ORDER NO. CERTIFICATION Constallium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the TEMPER GAUGE LENGTH ALLOY 7075 WIDTH CLAD requirements of the applicable specifications as 2.03000 in 144.50000 in 60.50000 in T651 indicated herein. Any werranty is limited to that 51.56 mm 3.670 mm 1.537 mm shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test ITEM ORDERED reports are on file, subject to examination." SPEC PLATE, SAWED Constellium Rolled Products Ravenswood, LLC MILL FINISH 859 Century Road **CUSTOMER SPECIFICATION** P.O. BOX 68 RAVENSWOOD, WV 26164 USA AMS QQ-A-250/12A PART NUMBER **B/L NUMBER** DATE SHIPPED 64636 07/22/2016 WT. SHIPPED NO. OF PIECES GOVT, CONTRACT NO.

Stave Good - Laboratory Manager

ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

AMS 4045K ASTM B209-14

5550.000 LB

14

Load Details

Piece Package Net Lbs Kg Serial Parent Lot 1001303129 1,850.000 839.145 9346164 03 1001303130 1,850.000 B39.145 9346164 01 1001303130 1,850.000 839.145 9346164 02

Lot: 9346164

Tensile - Room Temperature (US)

		Ultima	e (KSI)	Yield	I (KSI)	Elong	ation (%)
Direction	Tests	Min	Max	Min	Max	Min	Мах
LT	02	79.9	80.3	70.2	71.0	12.5	13.5

Tensile - Room Temperature (SI)

		Ultima	te (N/MM2)	Yield	(N/MM2)	Elonga	ation (%)
Direction	Tests	Min	Max	Min	Max	Min	Max
LT	02	551	554	484	490	12.5	13.5

P-860-155D REVISED: 10 2014

ALUMINUM PLATE 7075-T651 DOMESTIC 2.00" THICK X 7.0000" X 13.3750" PART NO. ** FROM PLATE ****

n

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-027450-011

Pg 2of2

Pg 2/2





CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

THYSSENKRUPP CA 3 н 2821 LANGSTAFF ROAD CONCORD ON L4K 5C6 Ť

0 IL. D Т a

THYSSENKRUPP CA 2821 LANGSTAFF ROAD CONCORD ON L4K 5CB CA

Signed by:

PECKOVERS 110443240 4075 INCLUSION Serial:20160721-0110443240 CUSTOMER PURCHASE ORDER NO. & ITEM PEC-276877 Constellium ORDER NO. CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been TEMPER GAUGE 1651 2.03000 in inspected and found in conformance with the ALLOY CLAD WIDTH LENGTH requirements of the applicable specifications as 7075 60.50000 in 144.50000 in indicated herein. Any warranty is limited to that 51.56 mm 1.537 mm 3,670 mm shown on Constellium Rolled Products' standard ITEM ORDERED General Terms and Conditions of Sales. Test SPEC PLATE, SAWED raports are on file, subject to examination." MILL FINISH Constellium Rolled Products Ravenswood, LLC 859 Century Road CUSTOMER SPECIFICATION P.O. BOX 68 AMS QQ-A-250/12A RAVENSWOOD, WV 26164 USA PART NUMBER B/L NUMBER DATE SHIPPED 64636 07/22/2018 WT. SHIPPED NO. OF PIECES GOVT, CONTRACT NO. 5550,000 LB 000003 Stave Good - Laboratory Manager

Chemistry (Actual)

Core

FE CU MN 0.15 1.41 0.05

MG CR 2.56 0.20

ZN TI 5.46 0.03 ZR

0.00

OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8: B557 DUNS Number: 090570149; CAGE Code: 1YWL9

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"

P-860-155D REVISED: 10 2014

ALUMINUM FLAT BAR 6061-T6511 .125" x .750" X 240.0000" PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-027450-009

Pg 1/1

Attn:



Material Test Report

Manifest: 316387

Ticket:

Ship To: ThyssenKrupp Materials NA

2821 Langstaff Road Concord, ON L4K 5C6 5506879

Our Order: (429847 -

Die: ES05485

Cust P.O.: 278787

Part: 05485-000-240

Alloy Temper: 6061 T6511 Print Date: 10/27/16

Description: (.125 x .750

DAS 14 9-89

Chemical Composition Range Ti OtherEach OtherTotal Cr <u>Zn</u> Cu Mn Mg 6061 Si Fe 0.40 0.15 8.0 0.04 Min 0.15 0.15 0.35 0.25 0.05 0.15 1.2 0.7 0.40 8.0 Max

Mechanical	Properties
------------	------------

Strength ksi

Sample 1D	Cast #	Lot#	Test Date	Ultimate Tensile	Yield 2% offset	Elongation 2" gage length
424907	3B4184	A11	10/27/16	46.69	42.47	13.6

Applicable Specifications: ASTMB221-14

AMS-QQ-A200/8A

Country of Origin: 85 Parkshore Drive, Brampton, Ontario CANADA L6T 5M1

Can Art Aluminum Extrusion Inc. certifies that materials shipped under this order have been inspected and tested in accordance with Aluminum Association and agreed upon customer specifications. Can Art assumes no liability for additional costs which may be incurred during the customer's manufacture and sale of its products, and is subject only to the replacement of any materials not within agreed upon specifications provided written notification is received by Can Art within 30 days from the date of shipment.

Siddharth Desai - Tensile Testing

Authorized:

Evan Eng, Quality Assurance Manager

DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM FLAT BAR 6061-T6511 .375" x 1.00" X 144.0000" PART NO.

PO/Rel 35031
We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results

BL PEC-027450-005

Pg 1/1



Service Center Metals

5850 Quality Way

CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

Mechanical Properties	We hereby certify that the material covered by this report has been inspected in acceptation, and has been found to meet the applicable requirements described herein, description, and that samples representative of the material met the composition limit thems produced and certified as 6061-T6511 also meet the requirements of 6061-T6. This product is RoHS-2, REACH, and DFARS compliant.	Quantity Certified 1,	ThyssenKrupp Materials NA-Concord,ON	ThyssenKrupp Materials NA-Concord, ON	BKT 700	Can Do.
es	naterial covered by this to meet the applicable to meet the applicable s representative of the as 6061-76511 also n ICH, and DFARS com	1,080 lbs 204pcs	NA-Concord,ON	NA-Concord,ON		Prince George, VA 23875
	report has been inspected to requirements described to material met the compositionet the requirements of 60 offiant.	CUSTOMER PART MUMBER RB0081	PEC-279601	315913	MANTEST NUMBER)875
Test Date	We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6. This product is RoHS-2, REACH, and DFARS compliant.	SCRB.375x1.000	6511	RB0081 12	DIE NUMBER	Made The the USA.
Ultimate Tensile Strength (KSI)	it certification forming a part of the roperties shown.		D.Schroeder (Canada)	12/6/2016		
Yield Strength (KSI)			AMS-QQA-200/8 Rev-A	ASTM-B221-14 StencilCont	CERTIFICATION	OUR ORDER NUMBER 1/TEM 279703
Percent Elongation	48 28-6 28-6 40 40 40 40 40 40 40 40 40 40 40 40 40	DAS		-		ਹੈ

Tests

Lot No.

N

201621177

12/3/16

43.40

max 44.20

min 37.80

max 38.50

min 17.40

max 18.30

min

	Car D. Will			100	2		l			ASL	ed in the	nd extrud	are melted a	SCM products are melted and extruded in the USA
Print Date: 12/6/2016	į	i) [
United States of America	0.15	0.05	97.87	0.02	0.01 0.02	0.07	0.86	0.06	0.22	0.24	0.64	6061		2K161104C 201621177
Melt Source:	Others Total	Each	2	1=!	<u>Zn</u>	िट	Ma	Mn	5	Fe.	S	Alloy	Lot No.	Cast #
								L	y 6061	m Allo	duminu	on for A	Compositi	Chemical Composition for Aluminum Alloy 6061

stor of Quality & Tachnical Services

DART AEROSPACE THYSSENKRUPP MATERIALS NA

STAINLESS STEEL ROUND BAR 303 STAINLESS .750" DIA X 144,0000"

PO/Rel 35031

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by

Certificate of Mill Test Results 23Jan 17

BL PEC-027450-003

Pg 1/1

NAS

Guelph, ON NIKIZ3 740 Imperial Road North North American Stainless Canada Inc.

METALLURGICAL TEST REPORT

6870 Highway 42 East Ghent, KY 41045-9615 (502) 347-6000

Certificate: 215009 3 Mail To:

007206 001 THYBBENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON LAKSC6

Customer:

THYSSENKRUPP MATERIALS 2821 LANGSTAFF ROAD Ship To: CONCORD, ON LAKSC6

Pinish: CD Steel 303 Date: 9/07/2016

Page: 1

Corresion:

Your Order:

PEC277672

PRODUCT DESCRIPTION:

SOLUTION AND TEMP 1900F MIN AMS 5640V TYPE 1, QGG-764B CONDITION A UNS 30300, Round Bar, Annealed, Cold Draw ASTM A582/12 EN 10204 3.1, ASTM A484/15

REMARKS:

MAS Order: IN 0236677

01

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE IN USA FREE FROM MURCURY AND LOW MELTING ALLOY CONTAMINATION 2011/65/EU.ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG

9-89 9-89

BI1735 6 Product Id Skid # Diameter .7500 Size Weight 780 ----Length----144.00 Mark Pieces Commodity Code

CHENIC

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NALYSIS

CM(Country of Melt)

ES(Spain) US(United States) ZA(South Africa) JP(Japan) Lab Accreditation Bureau, Chemical Analysis per ASTN A751/14a ISO/IEC 17025, Certificate# 12323

1000 HEAT g ğ Ω Œ .0328 . 3108 all P æ gi % % 00 .1455 . 5520 17.1285 CR % % D3 .3270 1.8445 * NA % OM .3050 × .0345 Ä \$.6060 æ 7 .0275

MECHANIC » L v ス 〇 ď H и П Н ini

BI1735 6		Product Id	
96 1°	a 4	0 1	4
R L 230.0	No.	ğ	
81.18	KSI	SAR	
81.18 104.43	ISI	STO	
39.68	y.	X.X	
26.52	% 4D	Eing	

of the test methods used, the material meets the specifications stated. These results relate only to the items lested and this report cannot be reproduced, except in its entirety, without the written approval of NAS. NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy

Doc No. 240391 Indexed 8Sep16 by sissup1

Dapt. Mgr. Technical

RIS LARK

9 407 4301

DART AEROSPACE

ALUMINUM FLT BAR ECONOPLT 6061-T6511 .500" X 12.00" X 144.0000" PART NO.

PO/Rel 35031

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs. **Certificate of Mill Test Results**

BL PEC-027450-007

23Jani7 Pg 1/1

KAISER ALUMINUM FABRICATED PRODUCTS



CERTIFIED TEST REPORT

Signed by:

http://Online.KaiserAluminum.com

KAISER ALUMINUM FABRICATED PRODUCTS, LLC 5205 KAISER DRIVE KALAMAZOO, MI 49048

CUSTOMER PO NUMBER: CUSTOMER PART NUMBER: PEC-278342-2 W61/STK			PRODUCT DESCRIPTION	N:		
			.500 X 12.000 PR	.500 X 12.000 PRECISION WIDE BAR		
KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:	KAISER LOT NUMBER.	ALLOY.	TEMPER:	
6017989	002	10/04/2016	Z00108144	6061	T6511	
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER.	DIAMIDAE/PHKNS:	WIDTH:	LENGTH:	
1016.000 LB	12.000 PCS	617037			12.000 FT	
SHIP TO:			SOLD TO:		1	
THYSSENKRUPP C 2821 LANGSTAFF F CONCORD, ON L4K	ROAD		THYSSENKRUPP CANADA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA			

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARI	DNESS	CONDUCT.	BEND
200108144	0001	0001	44.3	39.9	12.4	RE	94	N/A	N/A
700108144	00001	0002	43.9	39.5	12.5	RE	92	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA .	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	C.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
106598	.59	.26	.20	.07	.82	.06	.04	.02	.00	.00	.00	.01	.03

Applicable Requirements:

ASTM-B221-14 STENCILED ASME-SB221 2009 SECT II AMS-QQ-A-200/8A UNS#A96061 (T6511 also conforms to T6-not applicable to other tempers)

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS, NEITHER MERCURY NOR ANY
OF ITS COMPOUNDS ARE UTILITZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

CERTIFICATION

Raiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Aimee L. Macnowski, Quality & Technology Manager

Aime & Macrowth

Plant Serial: 00253478 Kaiser Order Number: 6017989

Page 1 of 1

Line Item: 002

DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM FLAT BAR 6061-T6511 1.250" x 2.00" X 144.0000" ART NO

PO/Rel 35031

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results

BL PEC-027450-010

Pg 1/1 23Jan 17



BILL 70

ThyssenKrupp Materials NA-Concord ON ThyssenKrupp Materials NA-Concord, ON

Quantity Certified

4,135 lbs

116pcs

CUSTOMER PART NUMBER

MRB1792

MQRB 1.250x2.000

ESCRIPTION 6061-T6511 MRB1792

PEC-279340

CUSTOMER PO

ALLOY / TEMPER

314603

MANUFEST NUMBER

DIE NUMBER

Service Center Metals

Prince George, VA 23875 5850 Quality Way

CERTIFIED INSPECTION REPORT AND TEST RESULTS

FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER 278856 13

DATE OF SHIPMENT

DERTIFICATION

11/21/2016

D.Schroeder (Canada

revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6.

This product is RoHS-2, REACH, and DFARS compliant

Mechanical Properties

Lot No.

O

201617706

SPECIFICATION ASTM-B221-14 StencilCont

AMS-QQA-200/8 Rev-A

68-6

48

Test Date 10/13/16 51.40 Ultimate Tensile Strength (KSI) 35 51.90 max min 47.90 Yield Strength (KSI) max 48.60 35 15,15 1200 Elongation DAS Percent

max 17.25

Chemical Composition for Aluminum Alloy 6061

Lot No.

Alloy

S

E

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M

Mg

2

201617706 201617706 6061 6061 0.74 0.74 0.37 0.37 0.32 0.33 0.10 0.10 0.88 0.88 0.09

1K161006D 1K160930Y 1K160930C

201617706

606

0.72

0.37

0.31

0.10

0.90

0.10

0.03 0.03

0.03 0.03

97.43 97.44

0.05

0.10 0.03

Zn

2

Each

Others Total

Melt Source:

0.03

97.41

0.05 0.05

0.15 0.15

United States of America

United States of America United States of America

Doc No. 246048 Indexed 25Nov16 by slssup1 SCM products are melted and extruded in the USA

Print Date: 11/21/2016

MATERIAL 17-4 DATE: 17	Rou	70	50 7	Р	O / BATCH NO	35031	136
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	12	1.0	20	THICKNE SHEET S	ESS ORDERED ESS RECEIVED IZE ORDERED IZE RECEIVED	. 750	
DESCRIPTION	NC (Chi			(COMMENTS		
SURFACE DAMAGE	Y	N					
CORRECT FINISH	(8)	N					
CORROSION		0					
CORRECT GRAIN DIRECTION	(8)	N	7-7				
CORRECT MATERIAL	(8)	Ν	17-4				
CORRECT THICKNESS	(Y)	N	, 750				
PHOTO REQUIRED	Y	(N)	1110	21113			
CORRECT MATERIAL	(8)	N	4/15	3693	644		
CORRECT REF # TO LINK CERT	(Y)	Ν	JEG-	# XUC	977		
DRRECT MATERIAL IDENTFICATION	-	Ν	113/1	K1+30			
CORRECT M# ON THE MATERIAL	0	Ν	M1364	, 4			
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	(R)					
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	B					
CUT SAMPLE PIECE	OF R	MAT	ERIAL AND F	PREFORM A S BELOW			
			HRC	HRB	DUR A	DUR D	
TYPE OF MATERIAL							
SIZE OF TEST SAMPLE							
	DING	.					

PAS

DATE:

ENGINEERING SIGNOFF (if required)

SIGNED OFF BY:

DATE:

DATE:

DATE:

MATERIAL <u>91303</u> DATE	RO. 3	20	F	PO / BATCH NO.:	3503//	366
MATERIAL CERT REC'D QUANTITY RECEIVED QUANTITY INSPECTED: QUANTITY REJECTED	24		THICKNI SHEET S	ESS ORDERED ESS RECEIVED BIZE ORDERED BIZE RECEIVED	,506	
DESCRIPTION	NCR (Check Y/N)			COMMENTS		
SURFACE DAMAGE	YM					
CORRECT FINISH	(Y) N					
CORROSION	Y					
CORRECT GRAIN DIRECTION	(P) N	0				
CORRECT MATERIAL	(P) N	-				
CORRECT THICKNESS	N					
PHOTO REQUIRED	YN		14587			
CORRECT MATERIAL		1 1 1 1 1	TH 1138	552		
CORRECT REF # TO LINK CERT	(Ý) N	7/27 6 **	POST	<u></u>		
CORRECT MATERIAL IDENTFICATION	(P) N	1 10 1	07	,		
CORRECT M# ON THE MATERIAL	(D) 1V	111260	0 / (
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	YA	,				
DOES THIS REQUIRE AN EXTRUSION REPORT	YA					
CUT SAMPLE PIECE	E OF MA	ATERIAL AND	PREFORM A	HARDNESS C	HECK	
	REC	ORD RESUL	1100	DURA	DUR D	
		HRC	HRB	DOKA	DOND	
TYPE OF MATERIAL			-			1
SIZE OF TEST SAMPLE						1
HARDNESS / DUROMETER REA	DING	rs located in the				

INSPECTION

INSPECTED BY:

DATE: 17/01/27 DATE:

ENGINEERING SIGNOFF (if required)

MATERIAL: M303	3, R	2	750	Р	O / BATCH NO.:	35031/1364
MATERIAL CERT REC'D: QUANTITY RECEIVED QUANTITY INSPECTED: QUANTITY REJECTED:	10),),		THICKNE SHEET S		
	,					
DESCRIPTION	NC (Chi	eck		(COMMENTS	
SURFACE DAMAGE	Y	(N)				
CORRECT FINISH	(Y)	N				
CORROSION	Y	B				
CORRECT GRAIN DIRECTION	8	N	255			
CORRECT MATERIAL	(2)	N	303			
CORRECT THICKNESS	(A)	N	. 750			
PHOTO REQUIRED	X	0	157	11087		
CORRECT MATERIAL	9	N	17-12	17		
CORRECT REF # TO LINK CERT	(X)	N	457	DA 751		
CORRECT MATERIAL IDENTFICATION	(X) (V)	N	13/3/1	197		
CORRECT M# ON THE MATERIAL	Ly	14	17100			
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	(R)				
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N				
CUT SAMPLE PIECE	= OF	MA	TERIAL AND	PREFORM A	HARDNESS C	HECK
CUT SAMPLE PIECE	_ O,	RECO	ORD RESUL	TS BELOW		
			HRC	HRB	DUR A	DUR D
TYPE OF MATERIAL						
SIZE OF TEST SAMPLE						
HARDNESS / DUROMETER REA	DING	3				
TIANDINEGO, DONG.	te	sters	located in the	Quality Office		

QC 18 INSPECTION	Dieso.	ENGINEERING SIGNOFF (if required)
INSPECTED BY	14	SIGNED OFF BY:
DATE	17/01/27	DATE:

			1
MATERIAL \$1303 DATE:	R	12	PO/BATCH NO: 35031/136
MATERIAL CERT REC'D QUANTITY RECEIVED QUANTITY INSPECTED: QUANTITY REJECTED			THICKNESS ORDERED THICKNESS RECEIVED SHEET SIZE ORDERED SHEET SIZE RECEIVED
DESCRIPTION	(Ch	CR eck (N)	COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(8)	N	
CORROSION	Y	(1)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL	(Y)	N	303
CORRECT THICKNESS	(8)	N	1.00
PHOTO REQUIRED	Y	B	TI NEW)
CORRECT MATERIAL	(Y)	N	45/7/ HO 2020
CORRECT REF # TO LINK CERT	V	N	142 h2 D1 Dha
ORRECT MATERIAL IDENTFICATION	Y	N	M301 K1.000
CORRECT M# ON THE MATERIAL	(Ý)	N	11136697
DOES THIS MATERIAL REQUIRE	Υ	N	
DOES THIS REQUIRE AN	Υ	(N)	
ENGINEERING SIGN OFF DOES THIS REQUIRE AN EXTRUSION REPORT	Y	MA.	ERIAL AND PREFORM A HARDNESS CHECK. ORD RESULTS BELOW HRC HRB DUR A DUR D
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER REA			
	VIIIN	9	located in the Quality Office

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

DATE:

INSPECTED BY:

DATE:

				THICKNE	SS ORDERED:	125	
MATERIAL CERT REC'D: QUANTITY RECEIVED	ye	2)				1125	
QUANTITY RECEIVED	1/	00					
QUANTITY INSPECTED:	11	200					
QUANTITY REJECTED				SHEET SIZ	ZE RECEIVED		
	t	CR.		C	OMMENTS		
DESCRIPTION	l '	eck N)		_			
	Y						
SURFACE DAMAGE	(Y)	N					
CORRECT FINISH CORROSION	Y	141					
CORRECT GRAIN DIRECTION	(8)	N					
CORRECT MATERIAL	10	N	1001,17	2			
CORRECT THICKNESS	(8)	N	1725				
PHOTO REQUIRED	X	N		2221	145	00-4-21	2/18
CORRECT MATERIAL	0	N	451M	19/120	V 1 1 = 4	ya + ac	1113
CORRECT REF # TO LINK CERT	(2)	N	HEAL	7.2	DY.13 E		
ORRECT MATERIAL IDENTFICATION	(2)	N	136601	0 2,7	2/1/45		
CORRECT M# ON THE MATERIAL	N	N	P115/8/09	<u> </u>			
DOES THIS MATERIAL REQUIRE	Y	(10)					
ENGINEERING SIGN OFF	1	(1)					
DOES THIS REQUIRE AN	Y	(N)					
EXTRUSION REPORT							
					LADDNESS (HECK	
CUT SAMPLE PIEC	E OF	MA	ERIAL AND PR	EFORM A	HARDNESS C	JI LOIK.	
	F	REC	RD RESULTS	HRB	DURA	DUR D	
			HRC	HND			
TYPE OF MATERIAL							
SIZE OF TEST SAMPLE	ירועי						
HARDNESS / DUROMETER REA	ADIN	9	located in the Qua	lity Office			

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

DATE:

MATERIAL MACE	5/	27					
MATERIAL CERT REC'D: QUANTITY RECEIVED QUANTITY INSPECTED: QUANTITY REJECTED:		9.4	3G 3G	THICKNE SHEET S	ESS RECEIVED:	2.00	
DESCRIPTION	(Ch	CR neck (N)		(COMMENTS		
SURFACE DAMAGE	Υ	(1)					
CORRECT FINISH	(4)	N					_
CORROSION	Y	(M)					
CORRECT GRAIN DIRECTION	(0)	N					
CORRECT MATERIAL	(Y)	N	70.79	576			
CORRECT THICKNESS	B	N	2.00C				_
PHOTO REQUIRED	Y	(N)	A 146	000	500/10		_
CORRECT MATERIAL	(3)	N	AMS	-QQ-A	11/1/2		
CORRECT REF # TO LINK CERT	80	N	HEAT.	4 70 7	C CO	000	_
ORRECT MATERIAL IDENTFICATION	(8)	N	P7 +07	19191	TIDOAZ		_
CORRECT M# ON THE MATERIAL	(8)	N	191346	47			
DOES THIS MATERIAL REQUIRE		100					
ENGINEERING SIGN OFF	Y	(N)					
DOES THIS REQUIRE AN		13					
EXTRUSION REPORT	Y	N					
			EEDIAL AND	DEECDM A	HARDNESS (CHECK	
CUT SAMPLE PIECE	E OF	· MA	TERIAL AND I ORD RESULT	S RELOW!	11/11/2/12/00		
		KEC	HRC	HRB	DUR A	DUR D	
			nrc	11110			
TYPE OF MATERIAL							
SIZE OF TEST SAMPLE	DIN						
HARDNESS / DUROMETER REA	MIIN	9		uality Office			

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SIGNED OFF BY:

DATE:

14

9-89

INSPECTED BY:

DATE:

DATE: 17	102/0	2		O / BATCH NO.		31/13/06
MATERIAL CERT REC'D:	us		THICKN	ESS ORDERED		275
QUANTITY RECEIVED:	12'			ESS RECEIVED		. 21.7
QUANTITY INSPECTED:	12'			SIZE ORDERED		
QUANTITY REJECTED:	d				10	
	Ψ		SHEET	IZE RECEIVED	- N A	
DESCRIPTION	NCR					
DESCRIPTION	(Check Y/N)		(COMMENTS		
SURFACE DAMAGE	YIN					
CORRECT FINISH	VN					
CORROSION	YN					
CORRECT GRAIN DIRECTION	Y N					
CORRECT MATERIAL	Y) N	Colon TU	2			
CORRECT THICKNESS	(Y) N	, 374				
PHOTO REQUIRED	XX					
CORRECT MATERIAL	YN	AMS- OC		8		
CORRECT REF # TO LINK CERT	(Y) N		るいでいいす			
PRECT MATERIAL IDENTFICATION	1500		WBO. 379	2000-1X		
CORRECT M# ON THE MATERIAL	YN	M1366	77			
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	YN					
DOES THIS REQUIRE AN EXTRUSION REPORT	YN					
CUT SAMPLE PIE				HARDNESS C	HECK.	
		HRC	HRB	DURA	DUR D	
TYPE OF MATERIAL						
SIZE OF TEST SAMPLE						
HARDNESS / DUROMETER RE	ADING					
	testers	located in the Q	Quality Office			
	RECO	ORD RESULT HRC	S BELOW HRB		DUR D	requir
				NOMELKING	SIGNOFF (II I	equited)
AR C						

MATERIAL: DATE:	MODERTOB2.000X1.250	PO / BATCH NO.: PO 35031 / 13669
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	12'	THICKNESS ORDERED: 2.00 x 1.250 THICKNESS RECEIVED: 2.012 x 1.201 SHEET SIZE ORDERED: N/A SHEET SIZE RECEIVED: N/A
		,

DESCRIPTION	(Cr	CR neck (N)	COMMENTS
SURFACE DAMAGE	Y		
CORRECT FINISH	Y	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL	Y	N	(icial Tla
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT MATERIAL	(X)	N	ASTMBQQI /AMS BOXX - 2001/8
CORRECT REF # TO LINK CERT	(Y)	N	Heat # 2016/17706
CORRECT MATERIAL IDENTFICATION	(Y.	N	MUCLEITLE B-2000 X 1.250
CORRECT M# ON THE MATERIAL	Y	N	M 13(0,697
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	z) (z	

CUT SAMPLE PIECE OF MAT RECO	ERIAL AND I		HARDNESS (CHECK.	
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	
SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING					

testers located in the Quality Office

DAS	
OC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: 48 9-89	SIGNED OFF BY:
DATE: 17 02 02	DATE:

MATERIAL: <u>16061</u> DATE:17-	-02	-0	3				
MATERIAL CERT REC'D:				THICKNE	SS ORDERED	D:	
QUANTITY RECEIVED:):	
QUANTITY INSPECTED:):	
QUANTITY REJECTED:			4):	
	N	CR					
DESCRIPTION	,	eck (N)		C	OMMENTS		
SURFACE DAMAGE	Y	(1)					
CORRECT FINISH	8	N					
CORROSION	Υ						
CORRECT GRAIN DIRECTION	8	N					
CORRECT MATERIAL	8	N					
CORRECT THICKNESS	(8)	N					
PHOTO REQUIRED	Υ	00					
CORRECT MATERIAL	8	N					
CORRECT REF # TO LINK CERT	Ø	N					-
RRECT MATERIAL IDENTFICATION	8	N	2001	08149			
CORRECT M# ON THE MATERIAL	W	N					
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	N					
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N					
CUT SAMPLE PIECE			ERIAL AND PE		HARDNESS (CHECK.	
			HRC	HRB	DUR A	DUR D	
TYPE OF MATERIAL							
SIZE OF TEST SAMPLE							
HARDNESS / DUROMETER REA	DING	2 F					

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	38	SIGNED OFF BY:
DATE:	FFB 0 3 7017	DATE:

MATERIAL:Huouit	7-6	0.5	00 40 6000 1	PO / BATCH NO	<u>P035081 M136</u> 69			
MATERIAL CERT REC'D:			THICKN	IESS ORDERED):			
QUANTITY RECEIVED:								
QUANTITY INSPECTED:				THICKNESS RECEIVED: SHEET SIZE ORDERED:				
QUANTITY REJECTED:				DIZE DECENTED	·):			
					•			
DESCRIPTION		CR						
DESCRIPTION	DESCRIPTION (Ch			COMMENTS				
SURFACE DAMAGE	Y	N						
CORRECT FINISH	OP	N						
CORROSION	Υ	W						
CORRECT GRAIN DIRECTION	(8)	N						
CORRECT MATERIAL	(Y)	N						
CORRECT THICKNESS	8	N						
PHOTO REQUIRED	Ý	0						
CORRECT MATERIAL	80	N						
CORRECT REF # TO LINK CERT	(Y)	N						
ORRECT MATERIAL IDENTFICATION	8	N	2016 2139	2				
CORRECT M# ON THE MATERIAL	Ø	N						
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	N						
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N						
CUT SAMPLE PIECE			ERIAL AND PREFORM A RD RESULTS BELOW	HARDNESS (CHECK.			
TYPE OF MATERIAL SIZE OF TEST SAMPLE			HRC HRB	DUR A	DUR D			
HARDNESS / DUROMETER REA	DINO	3						

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	36 9-89	SIGNED OFF BY:
DATE:	FER 0 3 2017	DATE:

MATERIAL: 17 6061 DATE: 17-				PO/BATCH NO PO35031/14/			
MATERIAL CERT REC'D:			TH	ICKNESS ORDERE	D:		
QUANTITY RECEIVED:				ICKNESS RECEIVED			
QUANTITY INSPECTED:							
QUANTITY REJECTED:				EET SIZE ORDEREI			
do in the telephone			500	EET SIZE RECEIVED	D:		
DESCRIPTION		CR neck					
DEGOTAL HOM	,	reck (N)		COMMENTS			
SURFACE DAMAGE							
CORRECT FINISH	(Y)						
CORROSION	Y	(D)					
CORRECT GRAIN DIRECTION	(0)	N					
CORRECT MATERIAL	(8)	N					
CORRECT THICKNESS	(Y)	N					
PHOTO REQUIRED	Υ	N					
CORRECT MATERIAL	(1)	N					
CORRECT REF # TO LINK CERT	N	N					
RRECT MATERIAL IDENTFICATION	8	N	20/6/0	858		-	
CORRECT M# ON THE MATERIAL	(Y)	N				-	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N					
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N					
ENGINEERING SIGN OFF DOES THIS REQUIRE AN	Y	N	ERIAL AND PREFOR		CHECK.		
			HRC HRE		DUR D		
TYPE OF MATERIAL				DONA	DOILD		
SIZE OF TEST SAMPLE							
HARDNESS / DUROMETER REA	DINIC	、					

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	9-88	SIGNED OFF BY:
DATE:	EEB U3 0012	DATE:



Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35031

Purchase Order Date 1/19/2017 PO Print Date 1/19/2017

Page Number 1 of 6

Order From:

VC-COP001

THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A" TORONTO, ON M5W 5V8 CA

Ship To: DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA

PO Unit Price

\$8.93

JAN 1 9 2017

Contact Name

Vendor Phone

905 669 9444

Buyer

Chantal Lavoie

Customer POID Customer Tax #

10127-2607

Ship To Contact

Ship To Phone

Terms Currency Net 30 CAD

Ship Via:

VENDOR'S TRUCK

FOB

FCA - (Free Carrier)

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ CD Taxable Promise Date	Req Qty/ Unit of Measure
1	M174R0.750	17-4 round bar .750	1/25/2017 Yes	14.20 f

17-4PH/S17400/TYPE 630 SS ROUND BAR PER AMS 5643/ASTM A564 GRAIN MUST BE ALONG LENGTH OF BAR. MINIMUM YIELD TENSILE STRENGTH = 100KSI MINIMUM ULTIMATE TENSILE STRENGTH = 150 KS1

M303R0.500

303 Round Bar 0.500"

1/25/2017

1/25/2017

24.00

\$126,82

Yes

1/25/2017

\$2.66 \$63.82

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

Line Total:

Line Total:

\$63.82

Extended Price

\$126.82

IAM 7-7-2017

13611

PO Instructions: NO PEC ST-8344



Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35031

Purchase Order Date 1/19/2017 PO Print Date 1/19/2017

Page Number 2 of 6

Order From:

VC-COP001

THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A" TORONTO, ON M5W 5V8 CA

Ship To: DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

905 669 9444

VENDOR'S TRUCK

Buyer **Customer POID**

10127-2607

Customer Tax#

Terms Currency

FOB

Net 30

Chantal Lavoie

(Free Carrier)

CAD **FCA**

Ship Via: Ship Acet:

1/25/2017

12.00

\$5.98

\$71.79

M303R0.750

303 Round Bar 0.750

Yes

1/25/2017

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

Line Total:

\$71.79

M303R1.000

303 Round Bar 1.00

1/25/2017

Yes 1/25/2017 12.00

\$9.08

\$108.99

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

Line Total:

\$108.99

M6061T6B0.375X01.000

6061T6 BAR .375 x 1.00

1/25/2017

12.00

\$4.58

\$55.00

Yes

1/25/2017

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

PO Instructions: NO PEC ST-8344



Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35031

Purchase Order Date 1/19/2017 PO Print Date 1/19/2017

Page Number 3 of 6

Order From:

VC-COP001

THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A" TORONTO, ON M5W 5V8 CA

Ship To: DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

905 669 9444

VENDOR'S TRUCK

Buver

Chantal Lavoie

Customer POID Customer Tax#

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Ship Via: Ship Acct:

M6061T6B0.500X06.000

6061-T6 Bar .500 x 6.00

1/25/2017

Yes

1/25/2017

Line Total:

\$55.00

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

\$10.74

\$128.88

M6061T6B0.500X12.000

6061-T6 Bar .500 x 12.00

1/25/2017

Yes

1/25/2017

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

Line Total:

\$128.88

\$21.23

\$254.75

12.00

Line Total:

\$254.75

PO Instructions: NO PEC ST-8344



Tel: 613 632 9577 Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35031

Purchase Order Date 1/19/2017 PO Print Date 1/19/2017

Page Number 4 of 6

Order From:

VC-COP001

THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 4275.POSTAL"A" TORONTO, ON M5W 5V8 CA

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

DART AEROSPACE LTD

CANADA

Ship To:

Contact Name

Vendor Phone

905 669 9444

Customer POID Customer Tax#

Chantal Lavoie 10127-2607

Net 30

Ship To Contact

Ship To Phone Ship Via:

VENDOR'S TRUCK

Terms Currency **FOB**

Buyer

CAD

FCA - (Pree Carrier)

Ship Acct:

M6061T6B0.750X00.750

6061-T6 Bar .750 x .750

1/25/2017

Yes

12.00 f \$4.58

\$55.00

1/25/2017

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR

ASTM B221

Line Total:

\$55.00

M6061T6B00750X00.125

6061-T6 Bar .750 x .125

1/25/2017

100.00

\$0.55

\$55.00

Yes

1/25/2017

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

Line Total:

\$55.00

M6061T6B2.000X01.250

6061-T6 Bar 2.00 x 1.25

1/25/2017

Yes

\$8.99 \$107.90

1/25/2017

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221

PO Instructions: NO PEC ST-8344



Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35031

Purchase Order Date 1/19/2017 PO Print Date 1/19/2017

Page Number 5 of 6

Order From:

VC-COP001

THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A" TORONTO, ON M5W 5V8

CA

DART AEROSPACE LTD Ship To:

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

Chantal Lavoie

FCA - (Free Carrier)

10127-2607 Net 30

CAD

CANADA

Buyer

Terms

FOB

Currency

Customer POID Customer Tax #

Contact Name

Vendor Phone

905 669 9444

Ship To Contact Ship To Phone

Ship Via:

Ship Acet:

VENDOR'S TRUCK

M7075T6B7.000X2.000

7075-T6 BAR 7.000" X 2.000" (order in billets - 1/30/2017

13.375")

Yes

1/30/2017

MATERIAL: 7075-T6 OR T651/T6510/T6511/T62 ALUMINUM BAR AS PER AMS-QO-A-225/9 OR AMS 4122/4123/4186/4187 OR PÉR AMS-QQ-A-200/11 OR QQ-A-250/12 CUT FROM PLATE

NOTE: CUT 6 PCS AT 13.375", GRAIN DIRECTION ALONG 13.375"

71401-45 12

PROCUREMENT QUALITY CLAUSES 1/25/2017

1/25/2017

No

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retension of quality documents

Line Total:

Line Total:

\$105.83

\$708.00

\$0.00

\$107.90

\$708.00

6.69

f

\$0.00

PO Instructions: NO PEC ST-8344



Tel: 613 632 9577 Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35031

Purchase Order Date 1/19/2017 PO Print Date 1/19/2017

Page Number 6 of 6

Order From:

VC-COP001

THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"

TORONTO, ON M5W 5V8

CA

Ship To: DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA

Contact Name

Ship To Contact

Ship To Phone

Vendor Phone

905 669 9444

VENDOR'S TRUCK

Buyer

Chantal Lavoie

Customer POID Customer Tax#

10127-2607

Terms

Net 30 CAD

Currency **FOB**

FCA - (Free Carrier)

Ship Via: Ship Acet:

Line Total:

\$0.00

PO Total:

\$1,735.95

PO Instructions: NO PEC ST-8344

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100

requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr:

1

Change Date:

1/19/2017